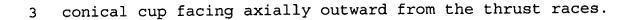
Having described the invention, what is claimed is:

- 1 1. A thrust bearing assembly comprising:
- 2 two thrust races;
- a plurality of rolling elements between and against the
- 4 two thrust races, for supporting relative rotation of the
- 5 thrust races about a common axis;
- a spring washer axially outward of the two thrust races
- 7 for engaging a support surface and for applying a preload to a
- 8 first of the two thrust races; and
- 9 retention means for retaining the two thrust races, the
- 10 rolling elements and the spring washer together as an assembly
- 11 to facilitate handling and installation.
  - 1 2. A thrust bearing assembly according to claim 1, wherein
  - 2 the retention means comprises an axially extending case
  - 3 positioned radially inward or radially outward of the two
  - 4 thrust races, the rolling elements and the spring washer, to
  - 5 restrain radial movement thereof; and wherein the case has
  - 6 radially extending portions engageable with the spring washer
  - 7 and a second of the two thrust races to restrain axially
- 8 outward movement of the spring washer and the second thrust
- 9 race.

- 1 3. A thrust bearing assembly according to claim 2, wherein
- 2 the case comprises a drawn cup with a lip extending radially
- and engageable with the spring washer to restrain axially
- 4 outward movement of the spring washer.
- 1 4. A thrust bearing assembly according to claim 3, wherein
- 2 the case includes a second lip extending radially and
- 3 engageable with the second thrust race.
- 1 5. A thrust bearing assembly according to claim 4, wherein
- 2 the case is formed of two drawn cups that overlap, forming a
- 3 cylindrical double-wall portion.
- 1 6. A thrust bearing assembly according to claim 4, wherein
- 2 the case is formed of a single drawn cup.
- 1 7. A thrust bearing assembly according to claim 4, wherein
- 2 the case comprises a drawn cup with an apertured bottom
- 3 portion extending radially and engageable with the spring
- 4 washer to restrain axially outward movement of the spring
- 5 washer.
- 1 8. A thrust bearing assembly according to claim 1, wherein
- 2 the spring washer comprises a Belleville spring having a



- 1 9. A thrust bearing assembly according to claim 1, wherein
- 2 the spring washer comprises a Belleville spring having a
- 3 conical cup facing axially inward toward the thrust races.
- 1 \10. A thrust bearing assembly according to claim 1, wherein a
- 2 first of the thrust races has an outer diameter smaller than
- 3 the outer diameter of a second of the thrust races, to
- 4 facilitate flow of lubricant, and wherein the first thrust
- 5 race has an inner diameter smaller than the inner diameter of
- 6 the second thrust race, to facilitate flow of lubricant.
- 1 1. A thrust bearing assembly according to claim 1, wherein
- 2 the rolling elements are rollers retained within a bearing
- 3 cage.
- 1 12. A thrust bearing assembly according to claim 11, wherein
- 2 the bearing cage is of a box-type configuration.
- 1 13. A thrust bearing assembly according to claim 11, wherein
- 2 the bearing cage is of a sigma-type configuration.



- 1 14. A thrust bearing assembly according to claim 2, wherein
- 2 at least some of the radially extending portions engageable
- 3 with the spring washer or thrust race are formed by staking.
- 1 `15. A thrust bearing assembly according to claim 1, wherein
- 2 the two thrust races, the rolling elements and the spring
- 3 washer are configured to have zero axial clearance within the
- 4 retention means, prior to installation of the thrust bearing
- 5 'assembly, such that damage from vibration during handling is
- 6 reduced.